

**CAPTURE RELEASE ASSAY SYSTEM AND METHOD****ABSTRACT OF THE DISCLOSURE**

A method for detecting one or more component of interest in a fluid-borne sample in a microchannel of a microfluidic device is disclosed which in one embodiment comprises the steps of flowing the fluid-borne sample which comprises the one or more component of interest through a binding channel region of the microchannel, which binding channel region comprises a component-binding moiety which is reversibly bound to a wall surface of the binding channel region, thereby binding at least a portion of the one or more component of interest to the component-binding moiety to form a bound complex; releasing the complex comprising the component-binding moiety and the one or more component of interest from the binding channel region thereby releasing the complex into the microchannel; and, flowing the released complex through a separation channel region of the microchannel and detecting the complex. Microfluidic devices and systems suitable for performing such analyses are also provided.